

Kentucky Public Pension Working Group

Strategic Investment and Governance Review

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Agenda

- Executive Summary
- Manager Performance and Analysis
- Historic Asset Allocation
- Investment Committee Structure
- Preliminary Recommendations

Executive Summary

- Mandate The Working Group Investment Sub-committee's mandate is to examine and recommend appropriate investment benchmarks, policies and portfolio strategies based upon expected investment returns and asset allocations of comparable public pension plans and other institutional investment portfolios.
- Source of Opportunity Costs Manager returns for both KRS and KTRS have been generally above median for the respective manager peer groups. Since opportunity cost for each fund must be attributed to either asset allocation or manager return, we are again left with the conclusion that asset allocation is the source.
- Manager Concentration KRS and KTRS have fewer managers and larger average allocations to managers than the median peer institution.
- Investment Expertise and Background While neither KRS nor KTRS requires that board or investment committee members possess investment experience, there seems to be a positive correlation among peer institutions between higher relative investment returns and required investment background for board and investment committee members.

Manager Performance

- Manager performance has exceeded expectations for both KRS and KTRS.
- Over the past three, five, and ten-year periods ending June 30, 2008, the majority of KRS and KTRS managers have ranked in the top half of their respective peer universe, with many ranking in the top quartile.
- Performance over the past year has been more varied, which is as expected due to the shorter time horizon. However, more managers have ranked in the top half of their universe versus the bottom half over the past year.
- Kentucky Retirement Systems' returns have ranged between the second and fourth quartiles of the Russell Mellon universe over the last 1, 3, 5 and 10-year periods ending June 30, 2008.
- Kentucky Teachers' Retirement System's returns have been either third or fourth quartile over the last 1, 3, 5 and 10-year periods.
- Manager selection and performance did not contribute to the systems' underperformance and likely improved performance.
- The underperformance of KRS and KTRS can be attributed to the asset allocation of each system.

Manager Performance – KRS

KRS Pension Fund Manager Universe Comparison Summary (as of 6/30/08)

		Peer Return	Ranking	s Distribution				
		1 Year		3 Years		5 Years		10 Years
1st Quartile Managers	2	(22%)	3	(43%)	2	(50%)	3	(100%)
2nd Quartile Managers	3	(33%)	1	(14%)	2	(50%)	0	(0%)
3rd Quartile Managers	3	(33%)	2	(29%)	0	(0%)	0	(0%)
4th Quartile Managers	1	(11%)	1	(14%)	0	(0%)	0	(0%)

KRS Insurance Fund Manager Universe Comparison Summary (as of 6/30/08)

		Peer Return	Ranking	s Distribution				
		1 Year		3 Years		5 Years		10 Years
1st Quartile Managers	3	(100%)	2	(67%)	3	(100%)	2	(100%)
2nd Quartile Managers	0	(0%)	1	(33%)	0	(0%)	0	(0%)
3rd Quartile Managers	0	(0%)	0	(0%)	0	(0%)	0	(0%)
4th Quartile Managers	0	(0%)	0	(0%)	0	(0%)	0	(0%)

- The KRS managers are ranked according to their 1, 3, 5 and 10-year returns against a peer universe of managers in the same asset class. The peer universe of managers is then divided into four quartiles.
- For the three-year period ending June 30, 2008, 5 of 9 KRS Pension Fund managers ranked in the top half of their respective peer universes. For the five-year period, 4 of 7 managers with sufficient data ranked in the top half. For the ten-year period, all 3 managers with sufficient data ranked in the top half.
- Individual manager rankings can be found on the next four pages.

Note: Peer return rankings only include active externally managed investments.

KRS Pension Fund – U.S. Equity Manager Performance

	P	Periods End	ding 6/30/0	8				C	Calendar Y	ear Endir	ıg	•		
Managers	1 Yr	3 Yrs	5 Yrs	10 Yrs	YTD	2007	2006	2005	2004	2003	2002	2001	2000	1999
Internal S&P 1500 Index	-12.7%	4.7%	8.0%	NA	-11.1%	5.3%	15.4%	5.8%	11.2%	29.6%	-20.5%	NA	NA	NA
S&P 1500	-12.7%	4.6%	8.2%	NA	-11.1%	5.5%	15.3%	5.7%	11.8%	29.6%	-21.3%	NA	NA	NA
Peer Ranking	45 th	45 th	56 th	NA	58 th	45 th	39 th	57 th	59 th	51 st	54 th	NA	NA	NA
Standard Deviation Ranking	23 rd	17 th	17 th	NA										
INVESCO Structured Core	-10.2%	7.8%	NA	NA	-11.2%	5.3%	22.8%	NA	NA	NA	NA	NA	NA	NA
S&P 500	-13.1%	4.4%	NA	NA	-11.9%	5.5%	15.8%	NA	NA	NA	NA	NA	NA	NA
Peer Ranking	29 th	11 th	NA	NA	50 th	55 th	$2^{\rm nd}$	NA	NA	NA	NA	NA	NA	NA
Standard Deviation Ranking	60 th	71 st	NA	NA										
Northern Trust Quantitative Advisors	-17.1%	3.9%	11.2%	NA	-9.1%	-2.5%	17.9%	6.7%	20.2%	50.9%	-15.0%	6.2%	-5.1%	NA
Russell 2000	-16.2%	3.8%	10.3%	NA	-9.4%	-1.6%	18.4%	4.6%	18.3%	47.3%	-20.5%	2.5%	-3.0%	NA
Peer Ranking	48 th	40 th	33 rd	NA	48 th	59 th	24 th	55 th	42 nd	17 th	42 nd	51 st	92 nd	NA
Standard Deviation Ranking	30^{th}	40 th	57 th											

KRS Pension Fund – International Equity Manager Performance

	P	eriods End	ling 6/30/0	8				C	alendar Y	ear Endir	ıg			
Managers	1 Yr	3 Yrs	5 Yrs	10 Yrs	YTD	2007	2006	2005	2004	2003	2002	2001	2000	1999
Barclays Global Investors	-11.5%	13.0%	NA	NA	-9.2%	8.4%	27.9%	NA						
MSCI EAFE (net)	-10.6%	12.8%	NA	NA	-11.0%	11.2%	26.3%	NA						
Peer Ranking	65 th	56 th	NA	NA	24^{th}	82 nd	24 th	NA						
Standard Deviation Ranking	20 th	23 rd	NA	NA										
Boston Companny	-14.3%	9.4%	NA	NA	-12.4%	6.2%	23.8%	NA						
MSCI EAFE (net)	-10.6%	12.8%	NA	NA	-11.0%	11.2%	26.3%	NA	NA.	NA	NA	NA	NA	NA
Peer Ranking	84 th	92 nd	NA	NA	74 th	91 st	66 th	NA						
Standard Deviation Ranking	11 th	8 th	NA	NA										
Pyramis Global Investors	-4.7%	14.7%	18.0%	NA	-8.9%	14.7%	24.3%	16.1%	20.0%	38.1%	-10.6%	NA	NA	NA
MSCI EAFE (net)	-10.6%	12.8%	16.7%	NA	-11.0%	11.2%	26.3%	13.5%	20.2%	38.6%	-15.9%	NA	NA	NA
Peer Ranking	18 th	29 th	25 th	NA	$23^{\rm rd}$	34 th	59 th	36 th	31 st	37 th	17 th	NA	NA	NA
Standard Deviation Ranking	67 th	48 th	48 th	NA										
Aberdeen	7.1%	29.4%	33.7%	19.1%	-6.9%	34.9%	36.7%	37.4%	28.0%	63.0%	6.9%	-4.9%	-18.6%	72.0%
MSCI Emerging Markets Free	4.6%	27.1%	29.7%	15.3%	-11.7%	39.4%	32.2%	34.0%	25.6%	55.8%	-6.2%	-2.6%	-30.6%	66.4%
Peer Ranking	16 th	21 st	5 th	17 th	5 th	66 th	17 th	24 th	25 th	31 st	2 nd	69 th	6 th	45 th
Standard Deviation Ranking	11 th	18 th	19 th	25 th										
Wellington	10.9%	30.9%	33.3%	18.5%	-10.1%	47.2%	35.2%	36.1%	27.8%	62.7%	-4.1%	4.2%	-31.1%	84.7%
MSCI Emerging Markets Free	4.6%	27.1%	29.7%	15.3%	-11.7%	39.4%	32.2%	34.0%	25.6%	55.8%	-6.2%	-2.6%	-30.6%	66.4%
Peer Ranking	4^{th}	12 th	5 th	17 th	31 st	7^{th}	23 rd	27 th	27 th	33 rd	43 rd	$11^{\rm th}$	60 th	23 rd
Standard Deviation Ranking	76 th	69 th	60 th	79 th										

KRS Pension Fund – Fixed Income Manager Performance

	P	eriods En	ding 6/30/0	8				C	alendar Y	ear Endir	ng			
Managers	1 Yr	3 Yrs	5 Yrs	10 Yrs	YTD	2007	2006	2005	2004	2003	2002	2001	2000	1999
Lehman Brothers	4.5%	3.3%	3.5%	5.6%	-0.6%	6.2%	4.6%	2.5%	4.6%	4.5%	10.8%	8.5%	11.8%	-0.8%
Lehman Aggregate Bond Index	7.1%	4.1%	3.9%	5.7%	1.1%	7.0%	4.3%	2.4%	4.3%	4.1%	10.3%	8.4%	11.6%	-0.8%
Peer Ranking	55 th	50 th	35 th	13 th	67 th	35 th	27 th	22 nd	31 st	51 st	8 th	29 th	$17^{\rm th}$	44 th
Standard Deviation Ranking	37 th	53 rd	59 th	39 th										
Baird Advisors	3.7%	NA	NA	NA	-0.6%	5.6%	NA	NA	NA	NA	NA	NA	NA	NA
Lehman Aggregate Bond Index	7.1%	NA	NA	NA	1.1%	7.0%	NA	NA	NA	NA	NA	NA	NA	NA
Peer Ranking	65 th	NA	NA	NA	67 th	54 th	NA	NA	NA	NA	NA	NA	NA	NA
Standard Deviation Ranking	19 th	NA	NA	NA										
Pyramis Global Investors	6.1%	NA	NA	NA	0.9%	6.4%	NA	NA	NA	NA	NA	NA	NA	NA
Lehman Aggregate Bond Index	7.1%	NA	NA	NA	1.1%	7.0%	NA	NA	NA	NA	NA	NA	NA	NA
Peer Ranking	35 th	NA	NA	NA	32^{nd}	26 th	NA	NA	NA	NA	NA	NA	NA	NA
Standard Deviation Ranking	6 th	NA	NA	NA										
Internal TIPS	15.4%	5.7%	6.0%	NA	5.2%	11.5%	0.6%	2.9%	8.2%	8.7%	NA	NA	NA	NA
MSCI Emerging Markets Free	15.1%	5.6%	5.9%	NA	4.9%	11.6%	0.4%	2.9%	8.4%	8.3%	NA	NA	NA	NA
Peer Ranking	24 th	21 st	6 th	NA	28^{th}	14 th	24 th	11 th	29 th	14 th	NA	NA	NA	NA
Standard Deviation Ranking	69 th	69 th	66 th	NA										
Weaver Barksdale TIPS	15.2%	5.7%	6.1%	NA	5.0%	11.4%	0.6%	2.9%	8.6%	8.8%	16.4%	NA	NA	NA
MSCI Emerging Markets Free	15.1%	5.6%	5.9%	NA	4.9%	11.6%	0.4%	2.9%	8.4%	8.3%	16.7%	NA	NA	NA
Peer Ranking	31 st	21 st	6 th	NA	36^{th}	27 th	24 th	$11^{\rm th}$	15 th	14 th	29 th	NA	NA	NA
Standard Deviation Ranking	76 th	69 th	60 th	NA										

KRS Insurance Fund – Manager Performance

	P	eriods End	ding 6/30/0	8				C	alendar Y	ear Endir	ıg			
Managers	1 Yr	3 Yrs	5 Yrs	10 Yrs	YTD	2007	2006	2005	2004	2003	2002	2001	2000	1999
Internal S&P 1500 Index	-13.0%	4.6%	8.2%	NA	-11.2%	5.0%	15.4%	6.3%	11.7%	29.6%	-20.9%	NA	NA	NA
S&P 1500	-12.7%	4.6%	8.2%	NA	-11.1%	5.5%	15.3%	5.7%	11.8%	29.6%	-21.3%	NA	NA	NA
Peer Ranking	48 th	48^{th}	55 th	NA	60 th	50 th	39 th	51 th	55 th	51 st	57 th	NA	NA	NA
Standard Deviation Ranking	23 rd	19 th	26 th	NA										
	р	eriods Eng	ding 6/30/0	8					'alendar V	ear Endir	10			
Managers	1 Yr	3 Yrs	5 Yrs	10 Yrs	YTD	2007	2006	2005	2004	2003	2002	2001	2000	1999
Fidelity	-4.5%	14.8%	17.9%	NA	-9.0%	14.9%	24.2%	15.9%	19.8%	37.7%	-10.4%	NA	NA	NA
MSCI EAFE (net)	-10.6%	12.8%	16.7%	NA	-11.0%	11.2%	26.3%	13.5%	20.2%	38.6%	-15.9%	NA	NA	NA
Peer Ranking	18 th	29 th	25 th	NA	24 th	33 rd	60 th	37 th	33 rd	40 th	15 th	NA	NA	NA
Standard Deviation Ranking	68 th	48 th	48 th	NA										
International large-cap equity, quantitativ	re .													
Aberdeen	7.1%	29.4%	33.7%	19.1%	-6.9%	34.9%	36.7%	37.4%	28.0%	63.0%	6.9%	-4.9%	-18.6%	72.0%
MSCI Emerging Markets Free	4.6%	27.1%	29.7%	15.3%	-11.7%	39.4%	32.2%	34.0%	25.6%	55.8%	-6.2%	-2.6%	-30.6%	66.4%
Peer Ranking	16 th	21 st	5 th	17 th	5 th	66 th	17 th	24 th	25 th	31 st	2 nd	69 th	6 th	45 th
Standard Deviation Ranking	11 th	18 th	19 th	25 th										
Wellington	10.9%	30.9%	33.3%	18.5%	-10.1%	47.2%	35.2%	36.1%	27.8%	62.7%	-4.1%	4.2%	-31.1%	84.7%
MSCI Emerging Markets Free	4.6%	27.1%	29.7%	15.3%	-11.7%	39.4%	32.2%	34.0%	25.6%	55.8%	-6.2%	-2.6%	-30.6%	66.4%
Peer Ranking	$4^{ m th}$	12 th	5 th	17 th	31 st	7 th	23 rd	27 th	27 th	33 rd	43 rd	$11^{\rm th}$	60 th	23 rd
Standard Deviation Ranking	76 th	69 th	60 th	79 th										
	Р	eriods End	ding 6/30/0	8				(alendar Y	ear Endir	าฐ			
Managers	1 Yr	3 Yrs	5 Yrs	10 Yrs	YTD	2007	2006	2005	2004	2003	2002	2001	2000	1999
Internal TIPS	15.3%	5.7%	NA	NA	5.2%	11.5%	0.5%	3.0%	8.9%	NA	NA	NA	NA	NA
MSCI Emerging Markets Free	15.1%	5.6%	NA	NA	4.9%	11.6%	0.4%	2.9%	8.4%	NA	NA	NA	NA	NA
Peer Ranking	26 th	21 st	NA	NA	26 th	22 nd	27 th	11^{th}	10 th	NA	NA	NA	NA	NA
Standard Deviation Ranking	58 th	56 th	NA	NA										

Manager Performance – KTRS

KTRS Manager Universe Comparison Summary (as of 6/30/08)

		Peer Return	Ranking	s Distribution				
		1 Year		3 Years		5 Years		10 Years
1st Quartile Managers	2	(15%)	2	(40%)	2	(40%)	3	(60%)
2nd Quartile Managers	5	(38%)	2	(40%)	2	(40%)	2	(40%)
3rd Quartile Managers	3	(23%)	0	(0%)	1	(20%)	0	(0%)
4th Quartile Managers	3	(23%)	1	(20%)	0	(0%)	0	(0%)

- The KTRS managers are ranked according to their 1, 3, 5 and 10-year returns against a peer universe of managers in the same asset class. The peer universe of managers is then divided into four quartiles.
- For the three and five-year periods ending June 30, 2008, 4 of 5 KTRS managers ranked in the top half of their respective peer universes. For the ten-year period, all 5 managers with sufficient data ranked in the top half.
- Individual manager rankings can be found on the next five pages.

KTRS – U.S. Equity Large-Cap Manager Performance

	P	eriods End	ding 6/30/0	08				C	alendar Y	ear Endir	ıg			
Managers	1 Yr	3 Yrs	5 Yrs	10 Yrs	YTD	2007	2006	2005	2004	2003	2002	2001	2000	1999
UBS Global	-15.9%	4.4%	9.1%	4.7%	-11.1%	2.1%	16.1%	10.7%	13.5%	32.0%	-15.5%	4.1%	7.0%	-7.7%
Russell 1000 Value	-18.8%	3.5%	8.9%	4.9%	-13.6%	-0.2%	22.2%	7.1%	16.5%	30.0%	-15.5%	-5.6%	7.0%	7.3%
Peer Ranking	38 th	$33^{\rm rd}$	32 nd	42 nd	30 th	47^{th}	78 th	10 th	52 nd	24 th	37 th	19 th	70 th	97 th
Standard Deviation Ranking	74 th	57 th	49 th	57 th										
S&P 500 Equity Index	-13.0%	4.5%	7.7%	3.0%	-11.9%	5.6%	16.0%	5.0%	10.9%	28.9%	-21.9%	-12.2%	-8.9%	21.4%
S&P 500	-13.1%	4.4%	7.6%	2.9%	-11.9%	5.5%	15.8%	4.9%	10.9%	28.7%	-22.1%	-11.9%	-9.1%	21.0%
Peer Ranking	55 th	48 th	47 th	49 th	62 nd	47 th	22 nd	57 th	43 rd	34 th	52 nd	66 th	66 th	35 th
Standard Deviation Ranking	38 th	39 th	28 th	55 th										
Todd Alpha	-16.2%	NA	NA	NA	-7.5%	-4.2%	NA							
S&P 500	-13.1%	NA	NA	NA	-11.9%	5.5%	NA							
Peer Ranking	87 th	NA	NA	NA	12 th	98 th	NA							
Standard Deviation Ranking	90 th	NA	NA	NA										•
Todd U.S. Equity	-11.0%	5.0%	8.7%	5.5%	-10.4%	5.4%	17.0%	7.6%	13.3%	26.5%	-19.2%	-2.2%	-1.3%	14.1%
S&P 500	-13.1%	4.4%	7.6%	2.9%	-11.9%	5.5%	15.8%	4.9%	10.9%	28.7%	-22.1%	-11.9%	-9.1%	21.0%
Peer Ranking	35 th	38^{th}	27 th	18 th	37 th	51 st	12 th	28 th	20 th	68 th	32 nd	15 th	36 th	77 th
Standard Deviation Ranking	14 th	12 th	8 th	16 th										
UBS Alpha	-17.4%	NA	NA	NA	-12.8%	1.8%	NA							
S&P 500	-12.4%	NA	NA	NA	-11.2%	5.8%	NA							
Peer Ranking	91 st	NA	NA	NA	83 rd	85 th	NA							
Standard Deviation Ranking	79 th	NA	NA	NA										
Wellington Intersection	-13.0%	NA	NA	NA	-11.8%	NA								
S&P 500	-13.1%	NA	NA	NA	-11.9%	NA								
Peer Ranking	55 th	NA	NA	NA	59 th	NA								
Standard Deviation Ranking	99 th	NA	NA	NA										
GE Asset Management	-6.7%	NA	NA	NA	-6.5%	5.7%	10.3%	NA						
Russell 1000 Growth	-6.0%	NA	NA	NA	-9.1%	11.8%	9.1%	NA						
Peer Ranking	57 th	NA	NA	NA	15 th	87 th	26 th	NA						
Standard Deviation Ranking	5 th	NA	NA	NA										

KTRS – U.S. Equity Mid-Cap and Small-Cap Manager Performance

	P	eriods End	ding 6/30/0	8				C	alendar Y	ear Endir	ıg			
Managers	1 Yr	3 Yrs	5 Yrs	10 Yrs	YTD	2007	2006	2005	2004	2003	2002	2001	2000	1999
S&P 400 Equity Index	-6.2%	NA	NA	NA	-3.2%	9.1%	8.1%	NA						
S&P 400 (Mid-Cap)	-7.3%	NA	NA	NA	-3.9%	8.0%	10.3%	NA						
Peer Ranking	17 th	NA	NA	NA	17 th	21 st	90 th	NA						
Standard Deviation Ranking	56 th	NA	NA	NA										<u></u>
Wellington Mid	-10.8%	NA	NA	NA	-4.0%	2.9%	11.2%	NA						
S&P 400 (Mid-Cap)	-7.3%	NA	NA	NA	-3.9%	8.0%	10.3%	NA	<i>NA</i>	NA	NA	NA	NA	NA
Peer Ranking	41 st	NA	NA	NA	21 st	65 th	63 rd	NA						
Standard Deviation Ranking	76 th	NA	NA	NA										<u> </u>
S&P 600 Equity Index	-0.6%	4.3%	NA	NA	-6.5%	-0.5%	15.1%	8.3%	23.7%	NA	NA	NA	NA	NA
S&P 600 (Small-Cap)	-0.5%	4.1%	NA	NA	-7.1%	-0.3%	15.1%	7.7%	22.6%	NA	NA	NA	NA	NA
Peer Ranking	28 th	37 th	NA	NA	26^{th}	37 th	52 nd	37^{th}	17 th	NA	NA	NA	NA	NA
Standard Deviation Ranking	19 th	33 rd	NA	NA										
Wellington Small	-19.7%	0.6%	9.1%	8.0%	-6.1%	-9.6%	13.1%	10.2%	19.0%	38.1%	-16.1%	6.4%	13.5%	26.2%
S&P 600 (Small-Cap)	-16.2%	3.8%	10.3%	5.5%	-9.4%	-1.6%	18.4%	4.6%	18.3%	47.3%	-20.5%	2.5%	-3.0%	21.3%
Peer Ranking	70 th	87 th	75 th	33 rd	23^{rd}	93 rd	72 nd	22 nd	50 th	71 st	51 st	50 th	41 st	27 th
Standard Deviation Ranking	67 th	84 th	66 th	67 th										

KTRS – International Manager Performance

	P	eriods End	ling 6/30/0	8				C	alendar Y	ear Endin	ıg			
Managers	1 Yr	3 Yrs	5 Yrs	10 Yrs	YTD	2007	2006	2005	2004	2003	2002	2001	2000	1999
Todd International	-8.6%	NA	NA	NA	-13.5%	16.3%	29.3%	NA	NA	NA	NA	NA	NA	NA
MSCI EAFE (net)	-10.6%	NA	NA	NA	-11.0%	11.2%	26.3%	NA	NA	NA	NA	NA	NA	NA
Peer Ranking	43 rd	NA	NA	NA	87 th	25 th	14 th	NA	NA	NA	NA	NA	NA	NA
Standard Deviation Ranking	83 rd	NA	NA	NA										
UBS International	-14.6%	NA	NA	NA	-13.0%	6.8%	NA	NA	NA	NA	NA	NA	NA	NA
S&P 500	-10.6%	NA	NA	NA	-11.0%	11.2%	NA	NA	NA	NA	NA	NA	NA	NA
Peer Ranking	84 th	NA	NA	NA	81 st	90 th	NA	NA	NA	NA	NA	NA	NA	NA
Standard Deviation Ranking	10 th	NA	NA	NA										
				•			•		•	•		•	•	

KTRS – Fixed Income Manager Performance

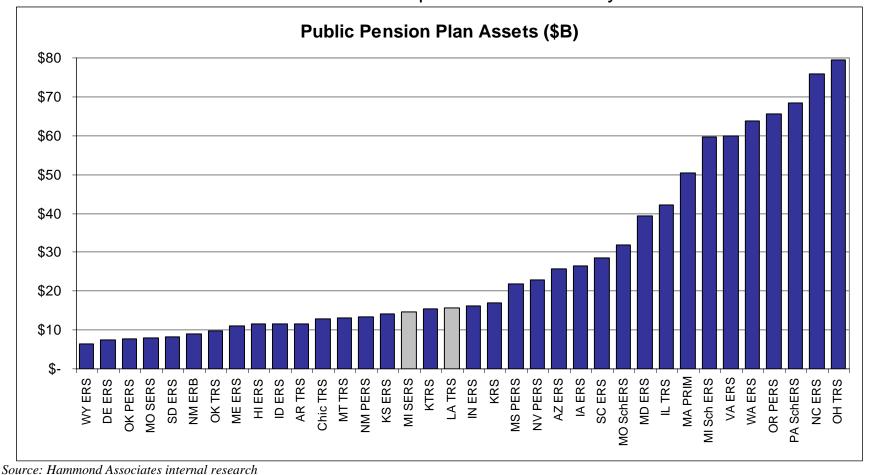
	I	Periods En	ding 6/30/0	8				C	alendar Y	ear Endir	ıg			
Managers	1 Yr	3 Yrs	5 Yrs	10 Yrs	YTD	2007	2006	2005	2004	2003	2002	2001	2000	1999
Galliard	7.2%	NA	NA	NA	1.1%	6.7%	4.1%	NA						
Lehman Government-Credit Index	7.2%	NA	NA	NA	1.0%	7.3%	3.8%	NA						
Peer Ranking	25 th	NA	NA	NA	35 th	23 rd	50 th	NA						
Standard Deviation Ranking	80 th	NA	NA	NA										
In-House Broad Market	7.8%	4.2%	3.9%	5.9%	1.6%	7.2%	4.0%	3.4%	4.3%	3.5%	12.0%	8.2%	12.6%	-2.4%
Lehman Government-Credit Index	7.2%	3.8%	3.6%	5.7%	1.0%	7.3%	3.8%	2.3%	4.2%	4.7%	11.0%	8.5%	11.8%	-2.2%
Peer Ranking	14^{th}	18^{th}	16^{th}	8 th	15 th	15 th	50 th	4 th	34 th	61 st	4 th	32 nd	9 th	79 th
Standard Deviation Ranking	85 th	91 st	92 nd	88 th										
Todd Bond	7.3%	4.3%	3.9%	5.6%	1.3%	7.0%	4.4%	2.8%	4.5%	4.1%	11.0%	8.2%	11.4%	-2.9%
Lehman Government-Credit Index	7.2%	3.8%	3.6%	5.7%	1.0%	7.3%	3.8%	2.3%	4.2%	4.7%	11.0%	8.5%	11.8%	-2.2%
Peer Ranking	21 st	15 th	$17^{\rm th}$	11^{th}	27^{th}	18 th	31 st	$10^{\rm th}$	29 th	48 th	8 th	30^{th}	29 th	86 th
Standard Deviation Ranking	54 th	77 th	83 rd	84 th										•
Todd Bond Plus	7.1%	4.1%	3.9%	5.8%	1.1%	7.0%	4.4%	3.0%	5.0%	4.0%	11.8%	8.1%	11.6%	-2.0%
Intermediate Government-Credit	7.2%	3.8%	3.6%	5.7%	1.0%	7.3%	3.8%	2.3%	4.2%	4.7%	11.0%	8.5%	11.8%	-2.2%
Peer Ranking	27 th	24 th	15 th	8 th	$33^{\rm rd}$	$17^{\rm th}$	32 nd	6^{th}	15 th	50 th	5 th	$34^{\rm th}$	24^{th}	72 nd
Standard Deviation Ranking	59 th	82 nd	92 nd	89 th										
In-House Long Bond	7.6%	3.4%	3.9%	6.0%	0.9%	7.0%	3.4%	4.0%	5.9%	4.1%	13.4%	8.0%	13.2%	-4.3%
Lehman Long Government-Credit Index	6.8%	2.2%	4.0%	6.3%	-0.7%	6.6%	2.7%	5.3%	8.6%	5.9%	14.8%	7.3%	16.2%	-7.6%
Peer Ranking	21 st	24 th	56 th	34 th	20^{th}	27 th	65 th	31 st	71 st	99 th	13 th	99 th	15 th	43 rd
Standard Deviation Ranking	60 th	61 st	33 rd	33 rd				-						

KTRS – Fixed Income Manager Performance

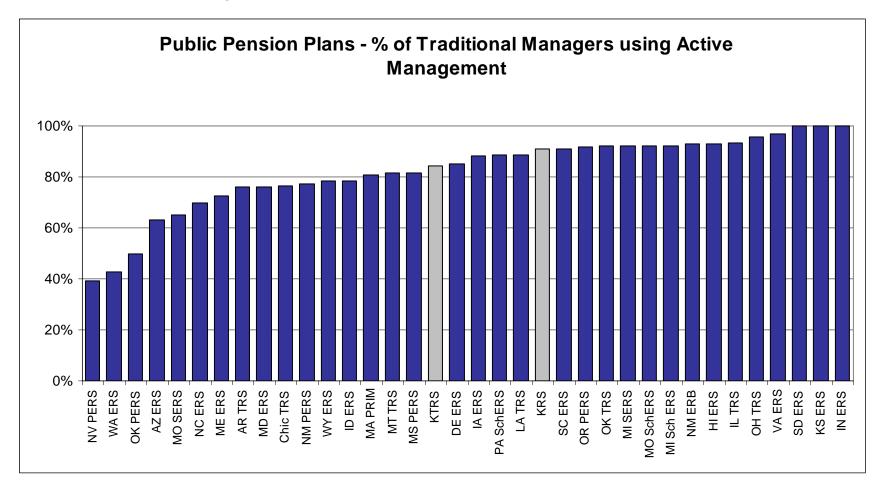
	F	Periods En	ding 6/30/0	8				C	alendar Y	ear Endir	ıg			
Managers	1 Yr	3 Yrs	5 Yrs	10 Yrs	YTD	2007	2006	2005	2004	2003	2002	2001	2000	1999
In-House Intermediate Bond	7.8%	4.7%	3.8%	5.7%	1.9%	7.6%	4.2%	2.3%	2.9%	3.8%	10.8%	8.3%	10.3%	0.6%
Lehman Intermediate Government-Credit Inde	7.4%	4.3%	3.5%	5.5%	1.4%	7.4%	4.1%	1.6%	3.0%	4.3%	9.8%	9.0%	10.1%	0.4%
Peer Ranking	12 th	5 th	19 th	10^{th}	8 th	10^{th}	39 th	33 rd	85 th	56 th	11^{th}	29 th	60 th	19 th
Standard Deviation Ranking	54 th	20 th	13 th	18 th										
Internal	5.3%	3.9%	2.4%	6.0%	0.7%	7.3%	4.4%	0.4%	2.0%	-0.9%	19.7%	10.4%	13.6%	-2.0%
Lehman Mortgage Backed Securities Index	7.8%	4.8%	4.6%	5.8%	1.9%	6.9%	5.2%	2.6%	4.7%	3.1%	8.7%	8.2%	11.2%	1.9%
Peer Ranking	44 th	21 st	88 th	6 th	37 th	9 th	35 th	99 th	98 th	99 th	1 st	4 th	1 st	74 th
Standard Deviation Ranking	9 th	5 th	99 th	99 th										
Life Retired	9.1%	5.4%	4.5%	NA	2.0%	8.5%	4.8%	3.1%	3.3%	2.4%	5.0%	NA	NA	NA
Lehman Intermediate Government Index	9.2%	4.8%	3.6%	NA	2.2%	8.5%	3.8%	1.7%	2.3%	2.3%	9.6%	NA	NA	NA
Peer Ranking	14^{th}	2 nd	2 nd	NA	18 th	8 th	5 th	6 th	54 th	30^{th}	98 th	NA	NA	NA
Standard Deviation Ranking	62 nd	17 th	2 nd	NA										
Scholarship Fund	9.3%	4.6%	3.5%	NA	2.2%	8.8%	3.4%	1.7%	3.5%	2.2%	14.0%	7.4%	NA	NA
Citi 3-Month Treasury Bill	3.3%	4.1%	3.1%	NA	1.1%	4.7%	4.8%	3.0%	1.2%	1.1%	1.7%	4.1%	NA	NA
Peer Ranking	1 st	2 nd	7 th	NA	3 rd	1 st	96 th	43 rd	7 th	69 th	1 st	57 th	NA	NA
Standard Deviation Ranking	87 th	99 th	99 th	NA										
TSA	7.6%	3.4%	3.9%	6.0%	0.9%	7.0%	3.4%	4.0%	5.9%	4.1%	13.4%	8.0%	13.2%	-4.3%
Citi 3-Month Treasury Bill	6.8%	2.2%	4.0%	6.3%	-0.7%	6.6%	2.7%	5.3%	8.6%	5.9%	14.8%	7.3%	16.2%	-7.6%
Peer Ranking	21 st	24 th	56 th	34 th	20^{th}	27 th	65 th	31 st	71 st	99 th	13 th	99 th	15 th	43 rd
Standard Deviation Ranking	60 th	61 st	33 rd	33 rd									1	

Public Pension Fund – Traditional Manager Study

- Hammond Associates conducted a study analyzing the traditional managers of 9 teacher retirement plans, 15 state/public employee plans and 11 consolidated state plans.
- Both KRS and KTRS are near the median plan size in the study's universe.

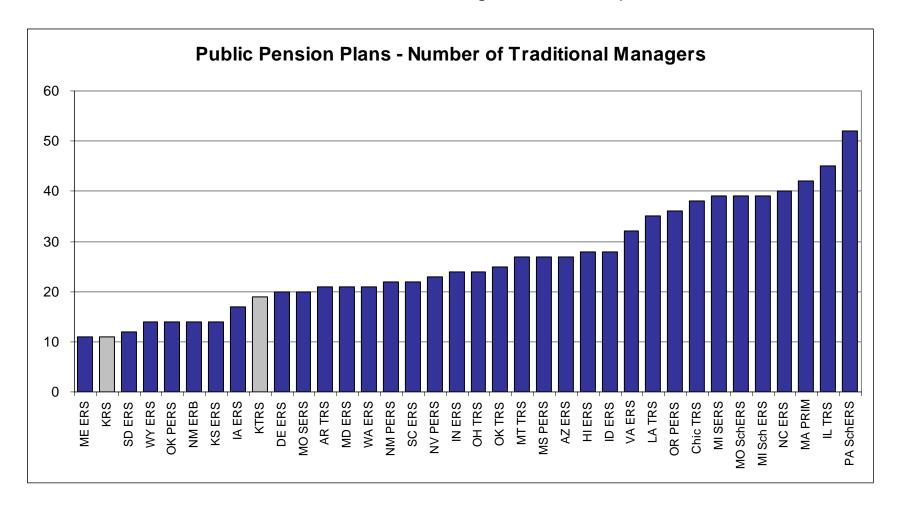


Both KRS and KTRS are near the median for the percentage of active managers used versus passive managers.

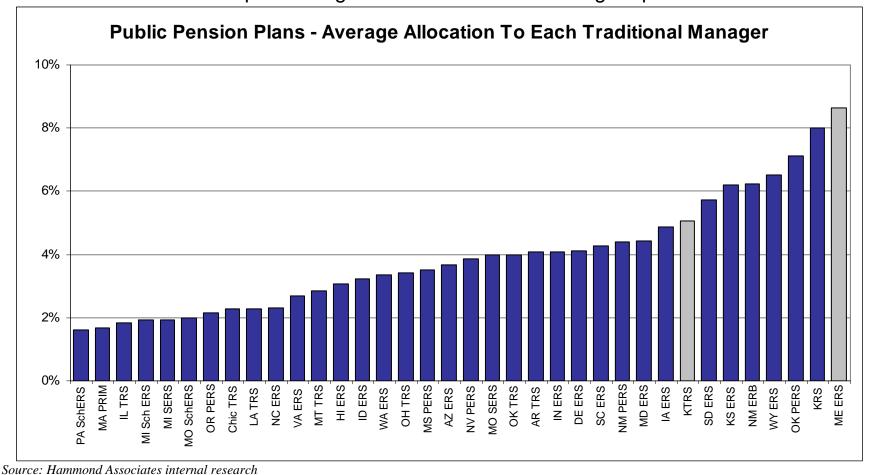


Source: Hammond Associates internal research

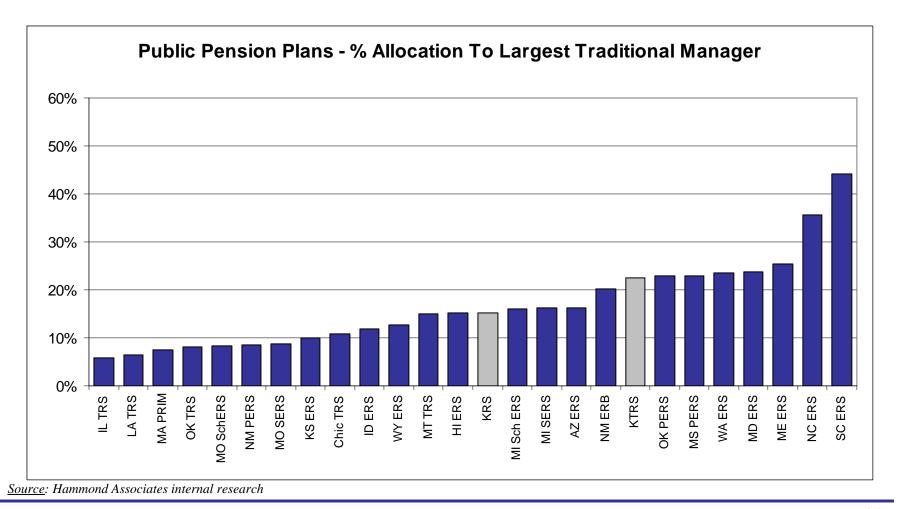
KRS and KTRS have far fewer traditional managers than their peers.



- Because KRS and KTRS have fewer traditional managers than their peers, the size of the investment with each traditional manger is much higher than the peer universe.
- The more concentrated positions give rise to additional manager specific risk.



- KRS has an allocation of approximately 15% to a single manager, Pyramis Global Investors.
- KTRS internally manages slightly more than 20% of its portfolio in an S&P 500 indexed fund.

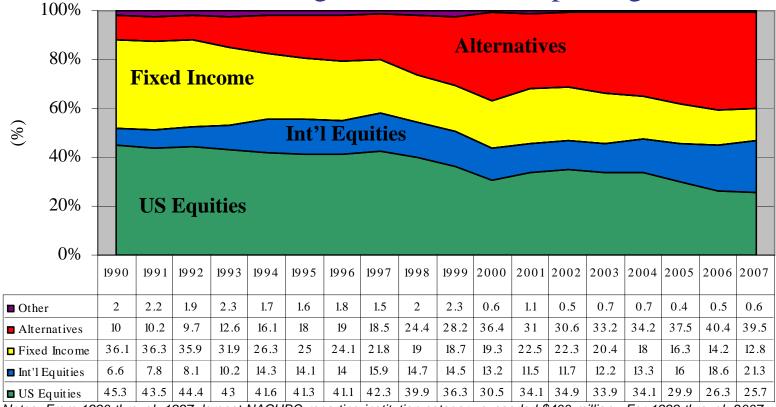


2007 NACUBO Study – Asset Allocation

Investment Pool Asset Allocation (%) As of June 30, 2007								
Responding Institutions (778)	Stocks	Stocks	and Cash	Equity	Funds	Assets	Other	
In Aggregate:								
Equal-Weighted Mean	42.1	15.4	22.1	3.2	10.6	4.9	1.4	
Dollar-Weighted Mean	26.7	20.8	14.1	9.0	18.2	10.2	1.0	
By Investment Pool Size:								
(Equal-Weighted Mean)								
Less than or equal to \$25 million	49.3	10.2	33.9	0.6	2.9	2.1	0.9	
\$26 million to \$50 million	50.7	12.4	24.3	0.6	6.9	3.8	1.0	
\$51 million to \$100 million	45.2	14.9	23.0	1.6	8.7	4.9	1.8	
\$101 million to \$500 million	38.8	17.8	17.9	3.9	13.8	5.8	2.0	
\$501 million to \$1 billion	30.4	20.1	15.7	7.7	17.7	7.7	0.8	
Over \$1 billion	25.7	21.3	12.8	10.4	20.5	8.6	0.6	
KRS Pension Fund	38.4	18.4	36.3	3.5	0.0	3.5	0.0	
KRS Insurance Fund	55.5	20.4	18.3	2.9	0.0	2.9	0.0	
KTRS	58.4	6.7	32.4	0.0	0.0	2.5	0.0	
By Type:								
(Equal-Weighted Mean)								
Public	42.4	14.7	26.5	2.6	8.4	4.1	1.6	
Independent	42.0	15.8	19.8	3.5	11.9	5.4	1.4	

<u>Source</u>: NACUBO: National Association of College and University Business Officers

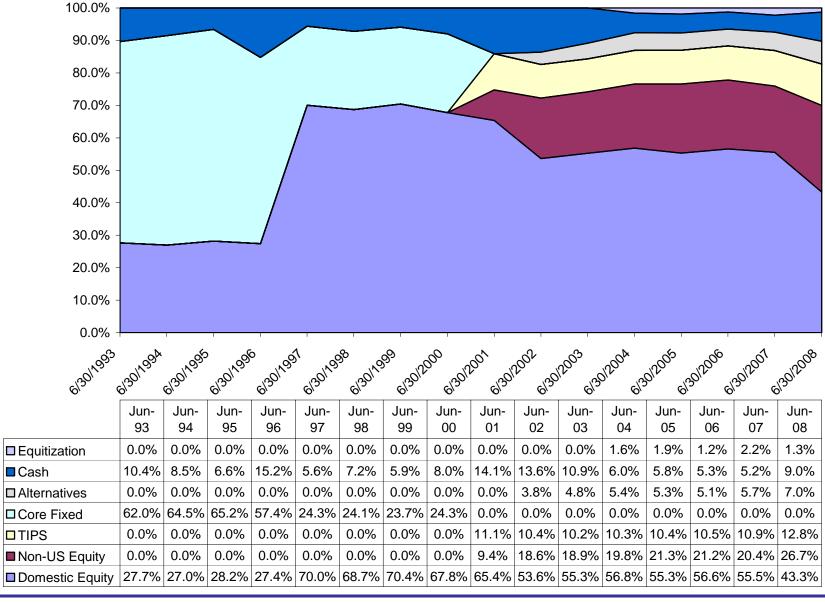
Asset Allocation for the Largest NACUBO Reporting Institutions



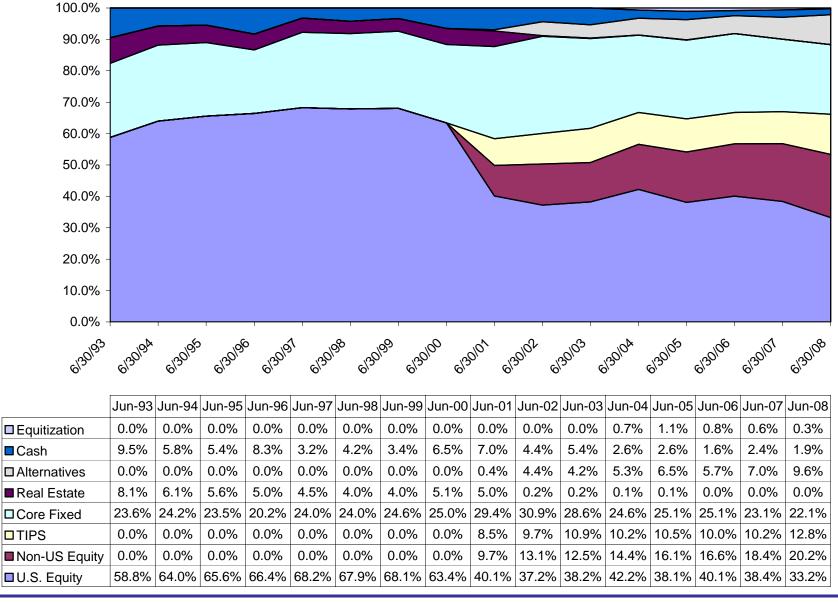
Notes: From 1990 through 1997, largest NACUBO reporting institution category exceeded \$400 million. For 1998 through 2007, the largest category exceeded \$1 billion.

- Since 1990, the largest NACUBO reporting institutions have significantly altered their asset allocations.
- Allocations to international equities and, especially, alternative investments have increased, while allocations to U.S. equities and fixed income have trended downward.
- These trends may be the result of institutional investors seeking higher returning or less-correlated asset classes.

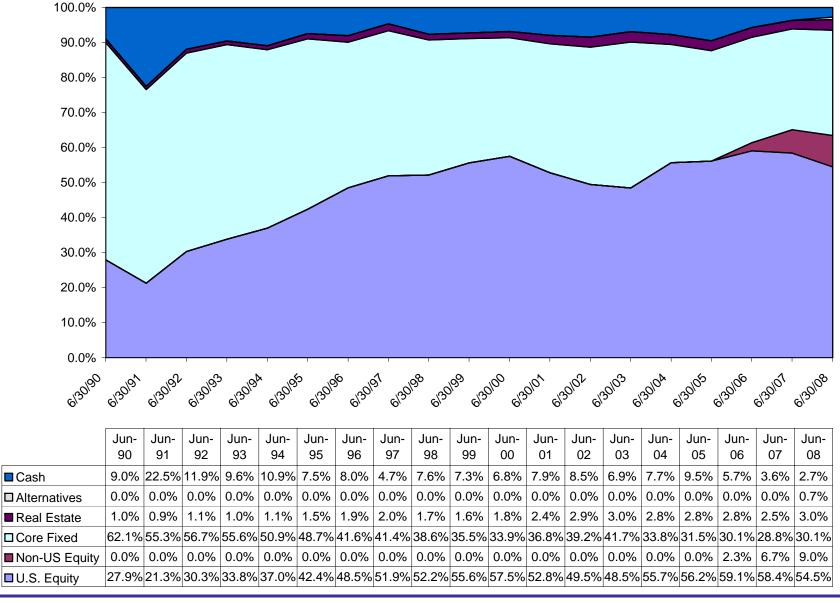
KRS Insurance Fund Asset Allocation (6/30/1993 – 6/30/2008)



KRS Pension Fund Asset Allocation (6/30/1993 – 6/30/2008)



KTRS Asset Allocation (6/30/1990 – 6/30/2008)



Asset Allocation Strategy

- Low return environment most institutions' return targets may not be achieved.
- U.S. stocks are priced to provide a 5-7% nominal return in the future
- International stocks remain relatively attractive, but their potential for outperforming U.S. equities has decreased
- Interest rates are low and inflation is increasing at alarming rates
- We believe that alternatives offer significant diversification advantages
- Conclusion: Diversify Globally and Consider Innovative Solutions
 - Avoid home country bias and allocate U.S. and international equity to their global market weights (43% US / 57% international).
 - The flood of money into alternative asset classes has reduced opportunities. However, with traditional asset classes still priced to provide very low returns, we believe alternative asset classes should play a significant role in a diversified portfolio.
 - There's little reason to make large bets on particular asset classes or strategies when the expected return premium is modest and there is a high potential for error.

Investment Committee Structure

- Many of the top performing plans have either boards or investment committees that require investment expertise.
- Investment experience has been defined by similar plans as the following:
 - At least ten years' substantial experience as any one or a combination of the following:
 - A portfolio manager acting in a fiduciary capacity
 - A securities analyst
 - An employee or principal of a trust institution, investment organization or endowment fund acting either in a management or an invested related capacity
 - A chartered financial analyst in good standing as determined by the CFA Institute
 - A professor at the university level teaching economics or investment related subjects
 - An economist
 - Any other professional engaged in the field of public or private finances.

Peer Return Rankings

nigs	Period Ending June 30, 2007			
	1-Year	3-Year	5-Year	10-Year
Pennsylvania Public School Employees Retirement System	22.9%	16.9%	14.5%	NA
Louisiana Teachers Retirement System	19.7%	15.0%	14.0%	9.7%
Washington Department of Retirement Systems	21.3%	17.0%	14.0%	NA
South Dakota Retirement System	21.4%	15.9%	13.8%	10.3%
Oregon Employees Retirement System	18.6%	15.6%	13.4%	NA
Missouri State Employees Retirement System	18.7%	14.2%	13.3%	9.2%
Ohio State Teachers Retirement System	20.7%	15.5%	13.2%	NA
California State Teachers Retirement System	21.0%	15.1%	13.1%	NA
California Public Employees Retirement System	19.1%	14.6%	12.8%	9.1%
Virginia Retirement System	20.4%	14.9%	12.8%	NA
Idaho Public Employee Retirement System	20.0%	14.3%	12.8%	NA
Oklahoma Teachers Retirement System	18.5%	12.8%	12.8%	NA
Louisiana State Employees Retirement System	19.2%	13.7%	12.6%	NA
Illinois Teachers Retirement System	19.2%	13.9%	12.5%	9.1%
New York State Teachers Retirement System	19.3%	13.8%	12.3%	8.8%
Kansas Public Employees Retirement System	18.0%	14.1%	12.3%	8.8%
Arkansas Teachers Retirement System	19.1%	14.0%	12.1%	NA
Minnesota Teachers Retirement Association	18.5%	14.0%	12.0%	8.5%
Illinois State Universities Retirement System	18.3%	13.4%	11.9%	8.5%
Minnesota Public Employees Retirement Association	18.3%	13.8%	11.9%	8.3%
Minnesota State Retirement System	18.3%	13.8%	11.9%	NA
Indiana Public Employees Retirement Fund	18.2%	12.8%	11.8%	NA NA
Arkansas Public Employees Retirement System	18.1%	13.3%	11.7%	NA
Ohio School Employees Retirement System	18.7%	13.8%	11.7%	8.2%
New Mexico Public Employees Retirement Association	18.1%	13.2%	11.7%	NA
Hawaii Employees Retirement System	17.7%	13.3%	11.7%	NA NA
Indiana State Teachers Retirement Fund	18.2%	12.9%	11.6%	NA NA
Iowa Public Employees Retirement System	16.3%	12.9%	11.6%	9.0%
Alaska Public Employees Retirement System	18.9%	13.1%	11.5%	9.0 % NA
Florida Retirement System	18.1%	12.9%	11.5%	8.5%
Delaware Public Employees Retirement System	15.1%	12.9%	11.5%	9.0%
Mississippi Public Employees Retirement System	18.9%	13.1%	11.5%	9.0% NA
,	16.9%	11.8%	11.4%	7.7%
Maine State Retirement System				
Maryland State Retirement and Pension System	17.6%	12.4%	11.3% 11.2%	7.2% NA
Texas Employees Retirement System	13.9%	11.8%		8.4%
Arizona State Retirement System	17.8%	11.9%	11.0%	6.4% NA
Oklahoma Public Employees Retirement System	16.4%	11.6%	10.9%	
Illinois State Employees Retirement System	17.1%	12.6%	10.8%	NA
Missouri Public Schools Retirement System	16.6%	11.8%	10.5%	NA
Kentucky Retirement Systems	15.3%	11.4%	10.4%	8.1%
North Carolina Retirement Systems	14.8%	10.6%	10.3%	NA 7.00/
Nevada Public Employees Retirement System	15.0%	11.0%	10.0%	7.9%
South Carolina Retirement Systems	13.4%	8.6%	8.8%	7.0%
Georgia Employees Retirement System	14.7%	9.5%	8.5%	NA
Georgia Teachers Retirement System	NA	9.5%	8.5%	NA
Kentucky Teachers Retirement System	15.2%	9.3%	8.5%	7.1%
Tennessee Consolidated Retirement System	13.2%	9.1%	8.3%	NA
LE I	00.527	17.00	44.504	10.531
High	22.9%	17.0%	14.5%	10.3%
Mean	17.9%	13.0%	11.7%	8.5%
Median	18.3%	13.2%	11.7%	8.5%
Low	13.2%	8.6%	8.3%	7.0%

<u>Note</u>: The universe includes combined public pension plans, state employee pension plans and state teacher retirement plans with publicly available data as of June 30, 2007. Plans are ranked according to the 5-year performance for the period ending June 30, 2007. Those plans with fiscal years ending other than June 30th were excluded from the analysis, including Pennsylvania State Employees' Retirement System.

Case Study – Virginia Retirement System

The Virginia Retirement System administers a defined benefit plan, a group life insurance plan, a deferred compensation plan and a cash match plan for Virginia's public sector employees.

Nine members serve on the VRS Board of Trustees. Their appointment is shared between the executive and legislative branches of state government. The Governor appoints five members, including the chairman. The Joint Rules Committee of the Virginia General Assembly appoints four members. The General Assembly confirms all appointments. Of the nine Board members, four must be investment experts; one must be a local government employee; one must be an employee of a Virginia public institution of higher education; one must be a state employee; and one must be an employee of a Virginia public institution of higher education; one must be a state employee; and one must be a public school teacher. The public employee members may be either active or retired.

The Virginia Retirement System also utilizes an Investment Advisory Committee which supports and advises the Board of Trustees in matters of investment policy, asset allocation and manager selection. The Investment Advisory Committee members are profiled on the next page.

Case Study – Virginia Retirement System (continued)

- Joe Grills Committee Chair, Former CIO, IBM Retirement Funds
- Erwin H. Will, Jr. Committee Vice Chair, Retired, Chief Investment Officer of VRS and Retired, President of Capitoline Investment Management
- Christopher J. Brightman Chief Executive Officer of the University of Virginia Investment Management Company (UVIMCO)
- Patricia Gerrick Deputy State Treasurer/State Investment Officer for the North Carolina Department of the State Treasurer
- Deborah Allen-Hewitt President, Rutledge Research
- Donald W. Lindsey Chief Investment Officer, The George Washington University
- Stuart A. Sachs -Retired President, Sovran Capital Management
- Rod Smyth Chief Investment Strategist, Riverfront Investment Group
- Hance West Managing Director, Investure

1st Quartile Board of Trustees Composition

- Pennsylvania Public School Employees Retirement System 1) Secretary of education 2) State treasurer 3) Executive director of the Pennsylvania School Boards Association (PSBA) 4-5) Gubernatorial appointments 6) Annuitant 7-9) Active members 10) ESP 11) PSBA representative 12-13) Two members of the House of Representatives, one from the majority party and one from the minority party 14-15) Two senators, one from the majority party and one from the minority party
- Louisiana Teachers Retirement System 1) State superintendent of Public Education 2) State treasurer 3) Chairman of the retirement committee of the House of Representatives 4) Chairman of the retirement committee of the Senate 5) Trustee representing school food service employees 6) Trustee representing state college and university employees 7-13) Trustee from Districts 1-7 14) Trustee representing superintendents 15-16) Retired teachers
- Washington Department of Retirement Systems 1-2) Two active Public Employees' Retirement System (PERS) members 3) One retired PERS member 4-5) Two active Teachers' Retirement System (TRS) members 6) One retired TRS member 7-8) Two active School Employees' Retirement System (SERS) members 9) One retired SERS member 10-11) Two individuals with experience in defined contribution plan administration 12) One Deferred Compensation Program participant
- South Dakota Retirement System 1-2) Teacher members 3-4) State employee members 5) Participating municipality member 6) Participating county member 7) Participating classified employee member 8) Current contributing Class B member 9) Current Class B member other than a justice, judge or magistrate judge 10) County commissioner of a participating county 11) School district board member 12) Elected municipal official of a participating municipality 13) Retired member 14) Faculty or administrative member employed by the Board of Regents 15-16) Head of principal department or head of a bureau under the office of executive management 17) Individual from private or public sector

1st Quartile Board of Trustees Composition (continued)

- Oregon Employees Retirement System 1-3) Individual with experience in business management, pension management or investing that are not members of the PERS system 4) Individual who is either an employee of the state in a management position or holds an elective office in the governing body of a participating public employer other than the state 5) Individual representing public employees
- Missouri State Employees Retirement System 1-2) Members of the Senate appointed by the President Pro Tem of the Senate 3-4) Members of the House of Representatives appointed by the Speaker of the House 5-6) Appointed by governor 7) State Treasurer 8) Commissioner of Administration 9-10) Active members elected by the active and terminated-vested members 11) Retiree elected by the retired members
- Ohio State Teachers Retirement System 1) Superintendent of Public Instruction or his/her designee
 2) Investment designee of state treasurer 3-4) Investment experts 5-9) Active teachers 10-11) Retirees
- California State Teachers Retirement System 1) Superintendent of Public Instruction 2) Controller 3)
 Treasurer 4) Director of finance 5-6) K-12 classroom teachers 7) Community college instructor 8)
 School board member or community college board member 9) Retired member 10-12) Public members
- California Public Employees Retirement System 1-2) Elected by and from all CalPERS members 3) Elected by and from all active State members 4) Elected by and from all active CalPERS school members 5) Elected by and from all active CalPERS public agency members 6) Elected by and from the retired members of CalPERS 7) Elected official of a local government 8) Official of a life insurer 9) Public representative appointed jointly by the Speaker of the Assembly and the Senate Rules Committee 10) State Treasurer 11) State Controller 12) Director of Department of Personnel Administration 13) Designee of the State Personnel Board

1st Quartile Board of Trustees Composition (continued)

- Virginia Retirement System 1-4) Investment expert 5) Experienced in employee benefit plans 6) Local government employee 7) Employee of a Virginia public institution of higher education 8) State employee 9) Public school teacher
- Idaho Public Employee Retirement System 1-2) Active PERSI members with at least ten years of service 3-5) Idaho citizens not members of the system
- Oklahoma Teachers Retirement System 1) State superintendent of Public Instruction 2) Director of the state Department of Career and Technology Education, or designee 3) Director of state finance 4-7) Representatives of investment, finance, or other profession 8) Representative of higher education 9) Member of the system of non-classified optional personnel status 10) Active teacher 11) Retired member of the system 12) Active teacher 13) Retired teacher

4th Quartile Board of Trustees Composition

- Arizona State Retirement System 1) Educator 2) Employee of a political subdivision 3) Retired member 4) Employee of the state 5) At large member representing any ASRS member group 5-9) Individual with at least ten years experience as a portfolio manager acting in a fiduciary capacity, a securities analyst, an employee or principal of a trust institution, investment organization or endowment fund acting in either a management or investment related capacity, a chartered financial analyst in good standing as determined by the association for investment management and research, a professor at the university level teaching economics or investment related subjects, an economist or any other professional engaged in the field of public or private finances
- Oklahoma Public Employees Retirement System 1) Member of the Corporation Commission 2) Member of the Tax Commission 3) Administrator of the Office of personnel management or designee 4) State Insurance Commissioner or designee 5) Director of State Finance or designee 6-8) Appointed by governor 9) Appointed by the Supreme Court 10-11) Appointed by the Speaker of the House of Representatives 12-13) Appointed by the President Pro Tempore of the Senate
- Illinois State Employees Retirement System 1) Director of the Governor's Office of Management and Budget 2) The Comptroller 3) Trustee not a state employee who shall be chairman 4-5) Two members of the system (one of whom shall be an annuitant over the age of 60 having 8 years of creditable service 6) Member of the system having at least 8 years of creditable service 7) Annuitant of the system who has been an annuitant for at least one full year
- Missouri Public Schools Retirement System 1-3) PSRS members 4) PEERS member 5) Retired member of either PEERS or PSRS 6-7) Public members who must residents of school districts included in retirement system, but must not be employees of such districts, nor be state employees or state elected officials

4th Quartile Board of Trustees Composition (continued)

- Kentucky Retirement Systems 1-2) KERS member 3-4) CERS member 5) SPRS member 6-8)
 Appointed by governor 9) Secretary of State Personnel Cabinet
- North Carolina Retirement Systems NA
- Nevada Public Employees Retirement System NA
- South Carolina Retirement Systems 1) Municipal employee representative 2) County employee representative 3-5) State employee representative 6-7) Public school teacher representative 8) Higher education teacher representative
- Georgia Employees Retirement System NA
- Georgia Teachers Retirement System 1) State auditor 2-3) Classroom teachers, not an employee of the Board of Regents of University of Georgia (BRUGA) 4) Director of the Office of Treasury and Fiscal Services 5) School administrator, not a BRUGA employee 6) Active TRS member who is not BRUGA employee 7) Active TRS member who is a BRUGA employee 8) Individual (citizen of Georgia) 9) Retiree 10) Individual with investment experience who is not a TRS member
- Kentucky Teachers Retirement System 1) Chief state school officer 2) State treasurer 3-6) Teachers
 7) Retired teacher 8-9) Lay trustees (non-teacher)
- Tennessee Consolidated Retirement System 1) Chair of the Legislative Council on Pensions and Insurance (non-voting) 2) Vice-chair of the Legislative Council on Pensions and Insurance (non-voting) 3) Commissioner of Human Resources 4) Commissioner of Finance and Administration 5) Comptroller of the Treasury 6) Secretary of State 7) Administrative Director of the Courts 8) State Treasurer 9) Director of TCRS 10-12) Teacher representative 13-14) State employee representative 15) Public safety officer representative 16-18) Local government representative 19-20) Retiree representative

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